

Remarks/Arguments:

Claims 1-17 are pending. Independent claims are claims 1, 4 and 8.

We note that the Office Action states that claims 1-16 are pending. However, Preliminary Amendment filed June 22, 2001 added claims 12-17.

Claims 4-5, 7 and 13 are rejected.

Claims 1-3, 8-11 and 16 are allowed.

Claims 6, 12 and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in proper independent form.

By this Amendment, claims 2 and 3 are amended to correct grammatical errors.

Rejection of Claims 4 and 5 under 35 U.S.C. § 102(b)

In the Office Action, at item 3, claims 4 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Inoue et al. (U.S. Patent No. 5,822,008) (hereinafter referred to as "Inoue").

This ground of rejection is respectfully traversed.

Claim 4 is directed to an image signal reproduction apparatus, and recites:

...an interlaced scanned image signal reproduction section for outputting the information signal as an interlaced scanned image signal of 60 fields per second;

a progressive scanning conversion section for converting the information signal to a progressive scanned image signal; and

a filtering section for receiving the progressive scanned image signal obtained by the progressive scanning conversion circuit section to change a frequency characteristic of the progressive scanned image signal so as not to generate a difference in

visual appreciation between the interlaced scanned image signal and the progressive scanned image signal.

That is, the progressive scanning conversion section converts the information signal (i.e., an interlaced scanned image signal to a progressive scanned image signal) and further the filtering section changes a frequency characteristic of the progressive scanned image signal so as not to generate a difference in visual appreciation between the interlaced and progressive scanned image signals.

Inoue discloses a scan conversion apparatus for converting a progressively scanned video signal to an interlaced video signal. (See col. 1, lines 6-8 of Inoue). More particularly, the general objective of Inoue is to reduce flicker when a video signal is converted from progressive scanning to interlaced scanning for display in television sets. (See col. 2, lines 57-61 of Inoue.)

Thus, in contrast Inoue, claim 4 recites a scan conversion apparatus for converting the information signal (as an interlaced scanned image signal) to a progressive scanned image signal. That is, the conversion of Inoue is directly opposite that recited in claim 1.

Accordingly, Inoue fails to disclose a progressive scanning conversion as recited in claim 4.

The Examiner seems to contend that the deflickering circuit 30, as shown in FIG. 4 and 5 of Inoue, corresponds to the "progressive scanning conversion section," as recited in claim 4. The deflickering circuit 30 of Inoue, however, does not receive an interlaced scanned image signal and does not convert the interlaced scanned image signal to a progressive scanned image signal. Instead, Inoue discloses that progressively scanned video signals are converted to interlaced video signals.

Moreover, Inoue fails to disclose or suggest a filtering section for receiving the progressive scanned image signal obtained by the progressive scanning conversion section to change a frequency characteristic of the progressive scanned image signal so as not to generate a difference in visual appreciation between the interlaced scanned image signal and the progressive scanned images signal.

In the Office Action, at page 3, the Examiner contends that col. 31, line 45 to col. 32, line 25, (i.e., claims 20 and 21 of Inoue) corresponds to the filtering section as recited in claim 4. Inoue, at the portions cited by the Examiner clearly discloses that the flicker reduction apparatus is for "reducing flicker in an interlaced video signal." (See preamble of claims 20 and 21 of Inoue.) In contrast, claim 4 recites "to change the frequency characteristic of the progressive scanned image signal so as not to generate a difference in visual appreciation between the interlaced scanned image signal and the progressive scanned image signal". That is, although the Inoue device may reduce flicker in an interlaced video signal, it does not change the frequency characteristics of the progressive scanned image signal so that the visual appreciation of the progressive scanned image signal is no different from the interlaced scanned image signal.

As provided in MPEP § 2131, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F. 2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Therefore, Inoue fails to disclose or suggest such distinguishing features recited in claim 4, and claim 4 is submitted to be allowable.

Accordingly, claim 4 is submitted to be allowable and the rejection of claim 4 should be withdrawn for at least the reasons set forth above. Similarly, claim 5, which includes all of the limitations of claim 4, should also be allowable for at least the same reasons as claim 4.

Rejection of Claims 4, 5, 7 and 13 under 35 U.S.C. § 103(a) over Kikuchi et al. and Katsumata et al.

In the Office Action at item 5, claims 4, 5, 7 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi et al. (EP 0782334) (hereafter referred to as "Kikuchi") in view of Katsumata et al. (U.S. Patent No. 5,276,515) (hereafter referred to as "Katsumata").

This ground of rejection is respectfully traversed.

Kikuchi discloses a method for converting an interlaced scan telecine signal into a progressively scanned telecine signal. (See col. 1, lines 3-12 of Kikuchi.) More particularly, Kikuchi discloses an up-converter, as shown in FIG. 5, for converting an interlaced telecine signal into a progressively scanned signal. (See col. 6, lines 3-9 of Kikuchi.)

Claim 4 was discussed above.

In the Office Action at page 4, the Examiner acknowledges that Kikuchi fails to teach "using filtering section for changing a frequency characteristic of an output of the progressive scanning conversion circuit section so as not to generate a difference in visual appreciation between interlace scanning image signal and the progressive scanned image signal." The Examiner contends, however, that Katsumata overcomes the deficiencies of Kikuchi in arriving at claim 4.

In particular, the Examiner contends that "Katsumata teaches an apparatus having a filter section for changing the characteristic frequency of a progressive scanning video signal. It would have been obvious to one of ordinary skill in the art to modify Kikuchi with Katsumata by using a filter as taught by Katsumata..."

Applicant respectfully disagrees with the Examiner's contentions.

Katsumata discloses a video signal processing circuit which processes an input video signal to display on a display unit a picture with an aspect ratio different from that of a picture of the input video signal by setting an expansion or compression coefficient optimal for the video signal. (See col. 3, lines 48-56 of Katsumata.) With reference to FIG. 1, Katsumata discloses a display circuit with an input terminal 101 for inputting progressive scanning video signal, a first memory circuit 104 and a second memory 105 for vertical and horizontal expansion of the progressive scanning video signal, a spatial filter 106 for filtering the vertically and horizontally expanded picture so that the picture displayed appears smooth and natural. (See col. 5, lines 50-63 of Katsumata.)

First, according to MPEP § 706.02(j), the prior art references when combined must teach or suggest all the claim limitations. However, when the teachings of Kikuchi are combined with those of Katsumata, the combination fails to teach or suggest the recitation in claim 4 of:

"a filtering section for receiving the progressive scanned image signal obtained by the progressive scanning conversion section to change a frequency characteristic of the progressive scanned image signal so as not to generate a difference in visual appreciation between the interlaced scanned image signal and the progressive scanned image signal"

(Emphasis added). This is because, Katsumata merely discloses an expansion of the input progressive scanning video signal and smoothing the vertically and horizontally expanded picture. Katsumata, however, is silent regarding any comparison in regards to the visual appreciation between the progressive scanned image signal and any interlaced scanned image signal.

In the alternative, the Examiner has failed to establish a *prima facie* case of obviousness. According to Section 2143.01 (III) of the MPEP, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination". *In re Mills* 916 F2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

The Examiner contends that "it would have been obvious to modify Kikuchi with Katsumata by using the filter as taught by Katsumata ... to filter the progressive scanned image signal by changing the frequency characteristic of the progressive image signal so as not to generate a difference visual appreciation between the interlace image signal and the progressive scanned image signal thereby improving the quality of the scanned progressive scanned image signal." Emphasis added; see paragraph spanning pages 4 and 5 of the Office Action.) The motivation alleged by the Examiner for combining the teachings of Katsumata with Kikuchi are not provided in the cited reference. Instead, they are based on hindsight reconstruction from the disclosure of the present invention. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness.

The cited art of Kikuchi and Katsumata, taken singularly or in any proper combination do not disclose or suggest at least the filter feature of claim 4.

Accordingly, for at least the reasons set forth above, claim 4 is submitted to be patentable and the rejection of claim 4 should be withdrawn.

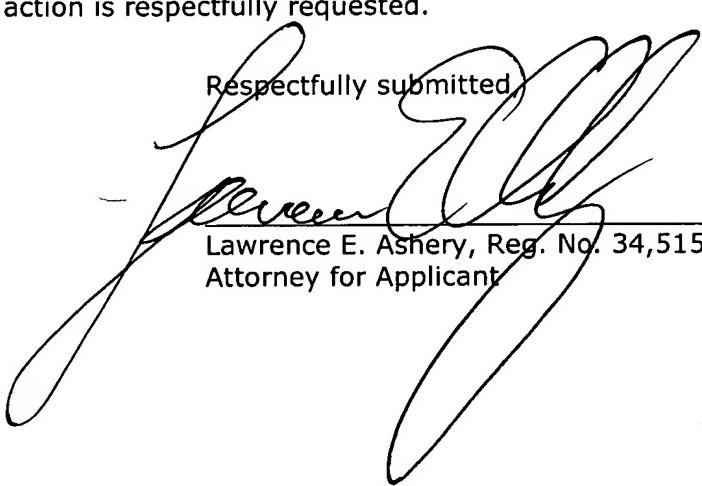
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Claims 5, 7 and 13 are also submitted to be allowable for at least the same reason as claim 4.

In view of the amendments and remarks set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,


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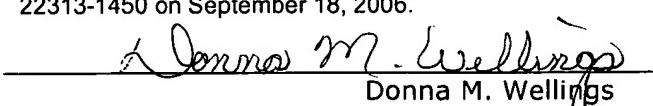
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